

# DOO YUL PARK

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## PROFESSIONAL EXPERIENCE

### **Software Engineer**

#### **Electronic Arts Los Angeles, CA**

August 2007 – present

- Programmed to solve loading time reduction issues by using PS3 profiling tools and dealing with Unreal 3 content size reduction for Medal of Honor Airborne PS3.
- Programmed boot time slide show player for PS3 which is separated from Unreal 3 engine to show opening screens as early as possible before the engine initialized.

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### **Software Engineer Intern**

#### **Electronic Arts Los Angeles, CA**

June 2006 – August 2006

- Programmed an extended version of my Procedural Object Generator which I programmed for 2005 Internship. Additional functionalities include procedural generation of alien tentacle shapes with procedural animation and mesh deformation support.
- Programmed a new shader widget box called MATHBOX for Unreal 3 Editor. The purpose of MATHBOX is to reduce hairy shader widget boxes into only one widget box by typing an equation string equivalent to lots of arithmetic widget boxes. This drastically improves readability, scalability and productivity of Unreal 3 shader programming.

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### **Software Engineer Intern**

#### **Electronic Arts Los Angeles, CA**

June 2005 – August 2005

- Programmed a L-system based Procedural Object Generator for the future EA game title of next generation console. This Procedural Object Generator automatically creates 3D models for game objects such as trees and rocks by manipulating simple parametric controls implemented in the tool. This tool makes it possible for graphic artists to rapidly iterate their design ideas without creating such 3D objects one by one manually. This tool also supports various ways to propagate these objects on a game level making each object look different to each other maintaining basic structure as same.

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### **Software Engineer**

#### **USC Annenberg School**

#### **Los Angeles, CA**

February 2005 – July 2005

- Programmed for graphics asset export/integration for HL2 SOURCE engine based Russian History Game MONTAGE. Dealt with HL2 character animation exporter and related AI.

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### **Lead 3D Engine Programmer**

#### **CCR Inc. Seoul, Korea**

April 2002 – March 2004

- Responsible for implementing all aspects of 3D engine on top of pre-existing 2D game engine.
- Designed and programmed 3D engine framework, data/asset management, optimized scene management, rendering, custom character animation system, collision detection, simple parametric physics, 3ds MAX export plug-in, special effects, particle system and shader, etc. (For more information about the engine, refer to the engine specification document attached or the website below.)  
[http://www.dooxpark.com/doc/Doox3D\\_Engine\\_Specification.pdf](http://www.dooxpark.com/doc/Doox3D_Engine_Specification.pdf)

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### **Technical Translator**

#### **MinPress, Seoul, Korea**

October 2001 – December 2002

- Translated two English game programming books into Korean. Translated version of these books are published by Min Press in Korea.  
*Beginning Direct3D Game Programming* by Wolfgang F. Engel/Premier Press  
*Special Effect Game Programming* by Mason McCuskey/Premier Press

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## TECHNICAL SKILLS

### **Languages**

C/C++(Advanced) OOP design, STL, WIN32 API  
Shader programming: HLSL, Cg  
HTML

C#(Intermediate)  
Flash ActionScript(intermediate)

### **Environment/SDK**

MS Visual Studio 2005  
DirectX SDK(especially advanced in Direct3D, DirectMusic)  
Playstation 3 Development environment(ProDG, SN)  
Perforce

XNA for homebrew XBOX360 game  
Playstation 3 SDK  
Unreal 3 Engine  
3ds MAX SDK export plug-in

## **Tools/Applications**

### **Advanced**

MS Visual Studio .NET 2005, Flash MX,  
DirectMusic Producer, Photoshop, Cakewalk/Sonar, 3ds Max, Adobe Premier Pro, MS Office

### **Intermediate**

Corel Painter, MS Project, Nvidia FX Composer, 3ds Max Character studio.

### **Beginner**

Dreamweaver, MAX/MSP, Processing

## **EDUCATION**

### **University of Southern California, School of Cinematic Arts, Los Angeles, CA**

MFA in Interactive Media

August 04 – August 07,

GPA 3.865, Outstanding Academic Achievement Award from Office of International Services, USC.

### **National University of Kyungpook, City of Taegu , South Korea**

Bachelor of Engineering Degree in Electronic Engineering

March 1994 – January 1999

## **PROJECTS**

All aspects of most of the projects listed below are done by myself including engineering, Interactivity design and audio/visual assets creation. What explained here is focusing on engineering aspect of them. For more information and screenshots, refer to my website.

### **Personal Projects**

- **IsoStar**, 2004 - present  
IsoStar is an action puzzle game developed on my 3D engine. This is a long time project being developed for IGF game festival and still in progress. The 3D engine features added or improved by this project include the game world and character movement/rotation based on spherical coordinate system, message system replacing simple state machine for flexible AI, scriptable interface system for various control objects that detects/responds to user input and animates in various ways.
- **Wind & 10 Fingered Wings**, April 2006  
Programmed a MIDI application using open Source MIDI library to communicate between MIDI keyboard and my 3D engine so that keyboardist can both play their improvisational music and visualize the music on the screen using procedural 3D graphics. Had a performance of this project for Iota Salon event at Experimental Digital Arts division, UCLA in April 2006. For the captured video refer to my website.

### **School Projects**

- **MFA Thesis Project : SONANOS**, May 2006 – May 2007  
SONANOS is presented at 2007 USC Interactive Media Thesis Show. It is based on my 3D engine. Major engineering aspect of this project includes L-system based procedural 3D graphics using Direct3D and procedural music generation using DirectMusic. Users of SONANOS will create musically structured world by planting alien-shaped trees that grow, animate and also generate procedural music synchronized with the visual.
- **Sims 2 Expansion Project, class sponsored by EARS : Minor Mischief**, August 2005  
Programmed with Edith tool to create new object behavior and various conditions between Sims characters and Sims objects. For example, my team made a smoking toilet after being flushed and a man got fire on him after farting around a fireplace.  
**Sims 2 Machinema, class sponsored by EARS**, August 2005  
Programmed using Edith Tool to create eccentric situations which are not normally happening in Sims 2 game. Captured using built-in Sims 2 tools and edited using Premier. Presented at the class and school seminar.
- **Aquarium of Pacific(Long Beach Aquarium) Project : Fishualization**, March 2006  
Programmed a Pseudo-motion-capture application using DirectX library, capturing movement of fishes using web cam and draw trail of the fishes to make them paint over the screen. Also by using additional web cam to capture user's motion with flash light pens, does this application let users draw their own on top of the drawings of fishes. This is presented at the Tech day of Aquarium of Pacific in March 2006. Also suggested to make it as a permanent installation piece for the aquarium.
- **Personal Flash Projects : Various mini games and interactive art projects.** 2004 – 2007  
Clock game, Poet Adaptation, EGO EGG, Doox's Café, Underwater Band  
Exercised the use of Flash Action Script in extensive ways to implement various Interactivity Design from classes.

### **Other Projects**

- **Bead Land 1 & 2**, March 2002 ~ 2003 : Group Projects that win a job for my team in CCR, 2002. Programmed rendering and character animation part of DirectX 8 based engine.
- **Crazy Racing**, 2003 ~ March 2004 : Experimental Team Project in CCR, 2002~2003. Programmed every aspects of the 3D engine on top of pre-existing 2D engine.